E. W. French.

Engine Hose.

No 68,432. Patented Sep 3. 1867.

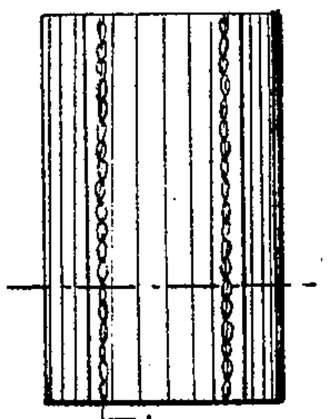

Fig. 3

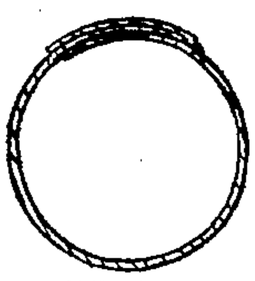

Fig. 4

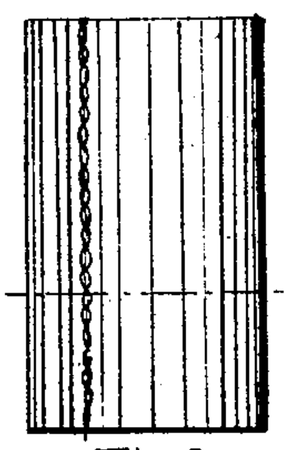

Fig. 2

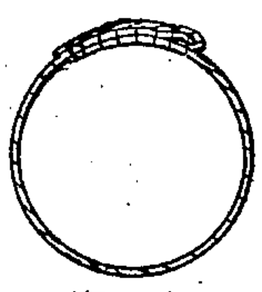

Fig. 5

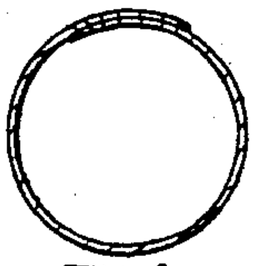

Fig. 6

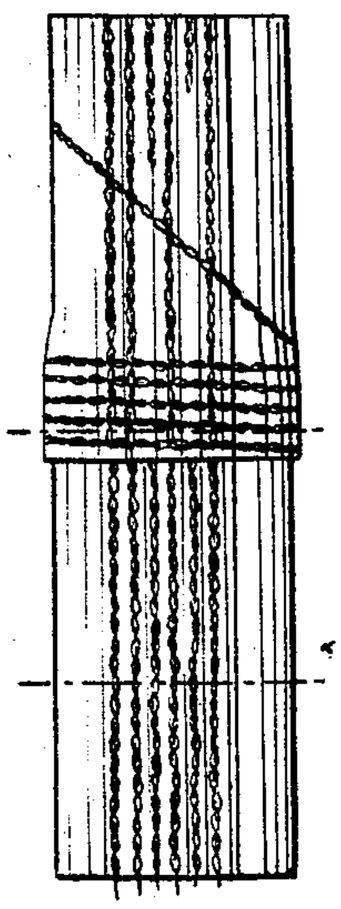

Fig. 1

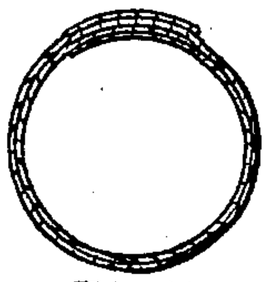

Fig 7

Witnesses.

Thomas Tolman

Susan A Tolman

Inventor.

Edwin W French.

United States Patent Office

EDWIN WASHBURN FRENCH, OF SOUTH SCITUATE, MASSACHUSETTS.

Letters Patent No. 68,432, *dated September* 3, 1867.

IMPROVEMENT IN ENGINE-HOSE.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, EDWIN WASHBURN FRENCH, of South Scituate, in the county of Plymouth, and State of Massachusetts, have invented a new and improved Engine-Hose; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 shows two pieces of the hose joined together, and indicates various directions in which it can be sewed.

Figure 2 shows a portion of the hose with the stitches covered to prevent chafing.

Figure 3 shows another mode of covering the stitches.

Figure 4 is a section through fig. 3.

Figure 5 is a section through fig. 2.

Figure 6 is a section through fig. 1, on the line *z z*.

Figure 7 is a section through fig. 1, on the line *x x*.

My invention consists of a hydraulic hose formed by lapping over the edges of the material of which it is composed, one upon the other, sewing through the material from outside to inside, and connecting together the pieces of which the hose is formed at their ends, by lapping them over and passing the stitches spirally around the joined ends all in one operation. The invention also consists in a welt or covering placed over the rows of stitches in order to protect them from wear. By this means I form a hose of greater strength, much lighter, and more flexible, and at the same time very much cheaper than the riveted hose now in use.

When rivets are used for joining the edges of the hose it is necessary to cut away a portion of the stock, which tends to weaken it, while in sewing the fibres are simply pressed apart by a sharp-pointed needle.

For sewing this hose I have constructed a machine, for which I have made application for a patent. The said machine consists of a sewing mechanism with the needle and its connections arranged over a tube containing a whirl or looper which is operated by means of a toothed rod.

The material to be sewed is placed around this tube, with one edge lapping over the other, and is passed through a rest or folder and stitched as it is fed under the needle, the mechanism being so contrived as to feed the work either lengthwise of the tube or around the same, so that when the ends of the material are joined, a seam will be sewed in a spiral or diagonal direction around the material on the tube, and thus securely join the edges together all at one operation. Two or more rows of stitches may be sewed through the lapped edges, and these stitches may be protected by a strip of leather or other material, one edge of which is sewed in with the first row of stitches, and being folded over, the whole row is sewed in at the other edge.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A hose, sewed through the lapped edges from inside to outside, when the ends of the pieces of which the hose is formed are joined together by a diagonal row or rows of stitches, at one continuous operation, as described.

2. I claim, in combination with the rows of stitches formed as above described, a welt or covering, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWIN W. FRENCH.

Witnesses:

THOMAS TOLMAN,

SUSAN A. TOLMAN.